AWIPS SYSTEM ADMINISTRATION NOTE 2a (for Electronic Systems Analysts)
Engineering Division
W/OSO321: FJGZ

SUBJECT   :   AFOS Asynchronous Line Setup Testing for AWIPS Builds 3 and 4

PURPOSE   :   Provide guidance to AWIPS system administrators for testing the
                           AFOS asynchronous line setup at Build 3 and 4 sites.

CANCELLATION   **:**   This note cancels and supersedes AWIPS System Administration
                           Note 2, Issuance 97-06, dated November 6, 1997.

BACKGROUND

Testing of the Asynchronous Scheduler is not included in the initial installation and system
acceptance testing supported by the AWIPS contractor (PRC). Therefore, this test must be
performed by the ESA immediately prior to and following system installation.

PROCEDURE

The AFOS to AWIPS circuit is an asynchronous data line that is used to provide a two-way
hydro data feed communication to AWIPS. The data parameters are 9600 bps, NO parity, 8
data bits, and 1 stop bit. The AFOS directory should be programmed for Binary Data [Y], Send
Only [N], and Transmit Only [N]. Data such as RR1s, RR2s, RR3s, and RRAs are to be
scheduled on the AFOS circuit. The AWIPS parameters should be properly set up at installation
time. The correct AWIPS port is:
            ?   on D350s: **/dev/tty2a1.**
            ?   on K series: **/dev/tty1p0**

Pre-Installation: To pre-test the circuit before installation, connect a PC or laptop at the end of
the AFOS feed, and use any communications program (such as PCPLUS) to verify that the
AFOS configuration and line integrity are functional.

Post-Installation: Use the following steps to test the circuit after installation:

   A. TO CHECK TRANSMISSION FROM AWIPS TO AFOS

       1. Login as user fxa and stop the AFOS comms server through the AS1 by typing:
               /awips/fxa/bin/stopAFOS.tclProg <enter>

2. Type :
> **# cat > testfile**........with a proper AFOS ZCZC CCCNNNXXX format

> ZCZC CCCNNNXXX (use an existing AFOS product)
> TTAAOO DDHHMM
> ...... A recognizable group of text
> ...... such as these lines. The only
> ...... purpose is to easily tell whether
> ...... the data made the trip over
> ...... the line to the AFOS database
> NNNN

3. At the UNIX prompt enter:
> on D350s:
> > **/awips/hydroapps/whfs/standard/bin/nl2crnl <tesfile> /dev/tty2a1 *<enter>***

> on K series:
> > **/awips/hydroapps/whfs/standard/bin/nl2crnl <tesfile> /dev/tty1p0 *<enter>***

4. Restart the AFOS comms Server as user fxa by typing:
> **/awips/fxa/bin/startAFOS *<enter>***

This procedure will transmit the test file to AFOS and save the updated version of the testfile key in the AFOS database.

B. TO CHECK TRANSMISSION FROM AFOS TO AWIPS

1. Stop the AFOS comms server by typing from AS1:
> **/awips/fxa/bin/stopAFOS.tclProg *<enter>***

2. Load the Kermit program, enter from AS1:
> **/usr/bin/kermit *<enter>***

3. At the Kermit prompt enter the following:
> ? on K series: **set line /dev/tty1p0 *<enter>***
> ? on D350s: **set line /dev/tty2a1 *<enter>***

> Then continue with:
> > **set speed 9600 *<enter>***
> > **set mode direct *<enter>***
> > **set duplex half *<enter>***

4. At the Kermit prompt, go to the terminal mode and enter:
        c *<enter>*

If the communications mode is established, the **Kermit>** prompt will disappear. A message will appear with the instructions that **ctrl-**, then **c** will exit the communications mode.

5. To check one side of the line enter the following command:

    At the AFOS ADM enter:
        acomms:xmit X CCCNNNXXX *<enter>*

        Where CCCNNNXXX is a product known to be currently
        stored and available in the local AFOS database:

        If the transmit circuit is working properly, the product will
        display on the screen**.**

6. To check both sides of the circuit enter the following command

    At the workstation in Kermit terminal mode enter:
        ZCZC REQ CCCNNNXXX NNNN *<enter>*

.
Observe the Kermit screen for a few moments. If both sides of the circuit are working correctly, the requested product will scroll across the Kermit communications window. This verifies that the request was sent to AFOS, received, and the requested product was sent back to AWIPS.

7. Terminate the Kermit comms session by typing:
        ctrl-\ *<enter>*
        c *<enter>*

8. Quit the Kermit program by typing:
        quit

9. Login as user fxa and restart the AFOS comms server through the AS1 by typing:
        /awips/fxa/bin/startAFOS *<enter>*

If there are any post-installation test problems, please report them to Franz Zichy, National Weather Service Headquarters (W/OSO321), (301) 713-1833 X128.

John McNulty
Chief, Engineering Division
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